

# MUR820 - MUR860

# Ultra-Fast Recovery Rectifiers

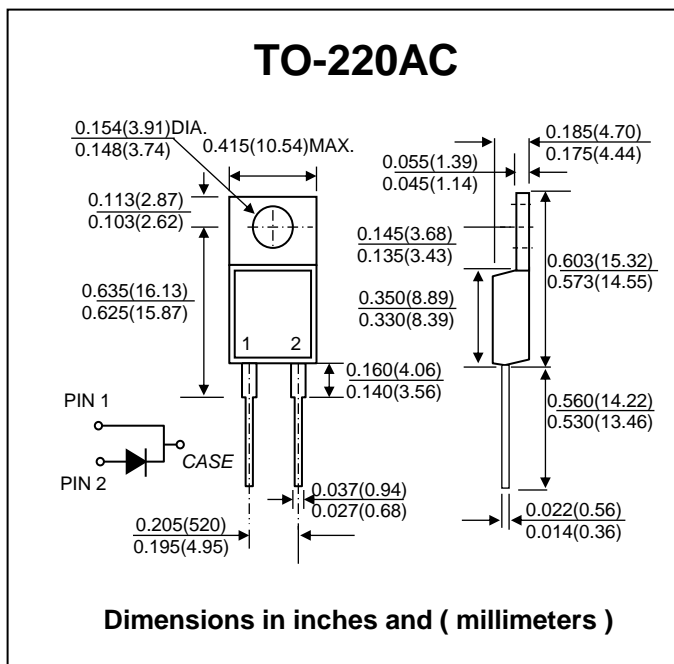
**PRV : 200-600 Volts**  
**Io : 8 Ampere**

### FEATURES :

- \* High frequency operation
- \* High surge forward current capability
- \* High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- \* Guard ring for enhanced ruggedness and long term reliability
- \* Solder dip 275 °C max. 7 s, per JESD 22-B106
- \* **Pb / RoHS Free**

### MECHANICAL DATA :

- \* Case :TO-220AC
- Molding compound meets UL 94 V-0 flammability rating
- \* Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- \* Polarity: As marked
- \* Weight : 1.8 grams (Approximately)



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

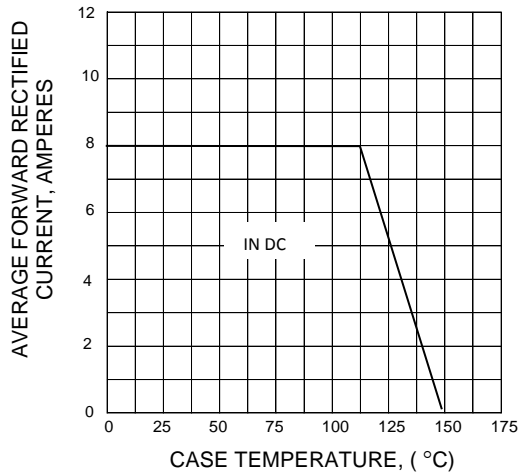
RATING	SYMBOL	MUR820	MUR840	MUR860	UNIT
Maximum Repetitive Peak Reverse Voltage	VRRM	200	400	600	V
Maximum Average Forward Current @60Hz Sine wave, R-load, Tc (Fig1.)	IF(AV)	8			A
Surge(Non-repetitive)Forward Current @60Hz Sine wave, 1 Cycle, Ta=25°C	IFSM	100			A
Current Squared Time @ 1ms≤t≤8.3ms Tj=25°C	I <sup>2</sup> t	41			A <sup>2</sup> s
Maximum Instantaneous Forward Voltage per diode at IF = 8.0 A	VF	0.975	1.3	1.5	V
Maximum Reverse Current at Rated DC Ta = 25 °C	IR	10			μA
Blocking Voltage per diode Ta = 125 °C	IR(H)	500			μA
Reverse Recovery Time (Note1)	Trr	50			ns
Typical Thermal Resistance from Junction to Case	RθJC	2.0			°C/W
Junction Temperature Range	TJ	- 55 to + 150			°C
Storage Temperature Range	TSTG	- 55 to + 150			°C

### Note :

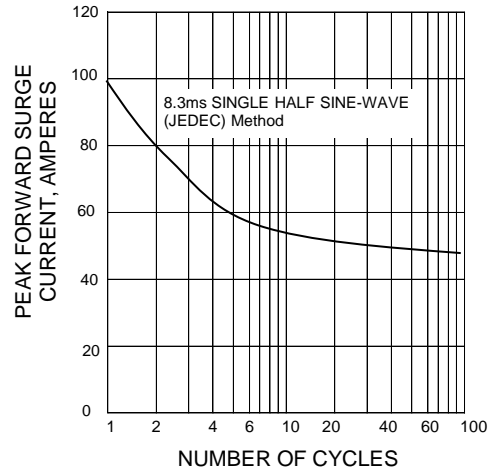
- (1) Reverse Recovery Test Conditions : IF = 0.5A, IR = 1A ; Irr = 0.25 A

**RATING AND CHARACTERISTIC CURVES ( MUR820 - MUR860 )**

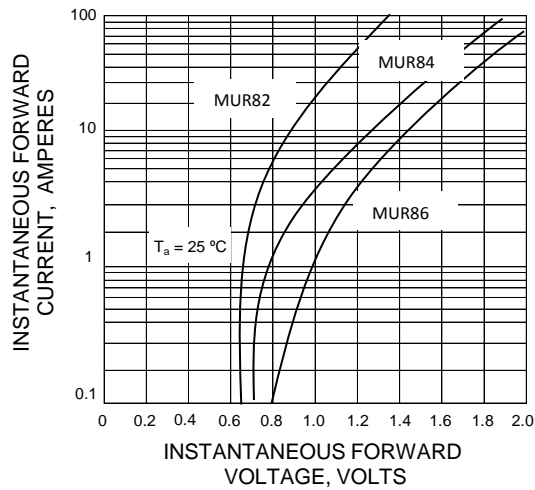
**FIG.1 - FORWARD CURRENT DERATING CURRENT**



**FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG. 4 - TYPICAL REVERSE CHARACTERISTICS**

